

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A method for part purification of fibrinogen having a high A $\alpha$ -chain integrity from milk, comprising the following steps:

a) precipitating the fibrinogen from milk;  
b) separating the precipitated fibrinogen from protease enzymes contained in whey and thereby recovering a part-purified fibrinogen, wherein said part-purified fibrinogen comprises high and low molecular weight sub-fractions;

c) contacting the part-purified fibrinogen with a hydrophobic interaction chromatography resin under conditions wherein the fibrinogen binds to the resin; and

d) removing the bound fibrinogen by means of elution, ~~which fibrinogen has~~ wherein elution results in the selective removal of said fibrinogen sub-fractions to produce high A $\alpha$ -chain integrity fibrinogen.

2. (Cancelled).

3. (Previously Presented) The method of Claim 1, wherein the precipitation step, separation step, or both are achieved in the presence of lysine, a lysine analogue,  $\epsilon$ -aminocaproic acid, or a combination thereof.

4. (Cancelled).

5. (Previously presented) A method for obtaining fibrinogen having a high A $\alpha$ -chain integrity from milk derived from a transgenic mammal, the method comprising:

(a) contacting the milk with a hydrophobic interaction chromatography resin under conditions wherein the fibrinogen in the milk binds to the resin, wherein said fibrinogen comprises high and low molecular weight sub-fractions; and

(b) removing the bound fibrinogen by means of elution, ~~which fibrinogen has~~  
wherein elution results in the selective removal of said fibrinogen sub-fractions to produce high  
A $\alpha$ -chain integrity fibrinogen.

6 - 8. (Cancelled).

9. (Previously Presented) The method of Claim 1, wherein the protease enzyme is plasmin, plasminogen, or combination thereof.

10- 11. (Cancelled).

12. (Previously Presented) The method of Claim 1, wherein the milk comprises whole milk, skimmed milk, or a milk fraction.

13. (Previously Presented) The method of Claim 1, wherein the milk is derived from a sheep, cow, goat, rabbit, camel, water buffalo, pig or horse.

14. (Previously presented) The method of Claim 1, wherein the fibrinogen is bovine or human derived.

15 - 31. (Cancelled).